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EXAMINER

STARKS, WILBERT L

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/760,511

**Applicant(s)**

YANG ET AL.

**Examiner**

Wilbert L. Starks, Jr.

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. §101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims 1-25 is directed to non-statutory subject matter.

2. Claims 1-18, 20, 22, and 24 are not claimed to be practiced on a computer, therefore, it is clear that the claims are not limited to practice in the technological arts.

On that basis alone, they are clearly nonstatutory.

3. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp.*

~~v. *Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999).~~ Specifically, the

Federal Circuit held that the act of:

...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

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Examiner finds that Applicant's "consultation request" references are just such abstract ideas.

4. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price*, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result' -- *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.* (emphasis added) *State Street Bank* at 1601.

5. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se* statutory. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

6. The court was being very specific.

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7. Additionally, the court was also careful to specify that the “useful, concrete and tangible result” it found was “a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer – i.e., “post-processing activity”.)

8. Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

9. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

...the dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating ‘abstract ideas’ or ‘natural phenomena’ ... As the Supreme Court has made clear, ‘[a]n idea of itself is not patentable, ... taking several abstract ideas and manipulating them together adds nothing to the basic equation’. *In re Warmerdam* 31 USPQ2d at 1759 (emphasis added).

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10. Since the Federal Circuit held in *Warmerdam* that this is the “dispositive issue” when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is “useful, concrete, and tangible” in similar cases. Accordingly, the Examiner finds that Applicant manipulated a set of abstract “consultation requests” to solve purely algorithmic problems in the abstract (i.e., what *kind* of “requests” are used? Algebraic word problems? Boolean logic problems? Fuzzy logic algorithms? Probabilistic word problems? Philosophical ideas? Even vague expressions, about which even reasonable persons could differ as to their meaning? Combinations thereof?) Clearly, a claim for manipulation of “consultation request” is provably even more abstract (and thereby less limited in practical application) than pure “mathematical algorithms” which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

11. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

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12. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of “useful, concrete, and tangible” the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a “useful, concrete and tangible result”. There is only manipulation of abstract ideas.

13. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

Finally, the decision in *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is **not to the contrary**. \*\*\* The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that ‘taking several abstract ideas and manipulating them together adds nothing to the basic equation’; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court’s conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

14. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the “useful, concrete, and tangible” nature of a set of claims under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.

15. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicant’s phrase “consultation request” is simply an abstract construct that does not limit the claims to the transformation of real world data (such as monetary data or heart rhythm data) by some disclosed process. Consequently, the necessary conclusion under *AT&T*, *State Street* and *Warmerdam*, is straightforward and

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clear. The claims take several abstract ideas (i.e., “consultation requests” in the abstract) and manipulate them together adding nothing to the basic equation. Claims 1-22 are, thereby, rejected under 35 U.S.C. §101.

16. Regarding the “system” recitals in claims 1 – 17, and 23 and the presumed “product of manufacture” claims in claims 19-21, 24, and 25 the invention is still found to be nonstatutory. Any other finding would be at variance with current case law. Specifically, the Federal Circuit held in *AT&T v. Excel*, 50 USPQ2d 1447 (Fed. Cir. 1999) that:

Whether stated implicitly or explicitly, we consider the scope of Section 101 to be the same regardless of the form -- machine or process -- in which a particular claim is drafted. *AT&T v. Excel*, 50 USPQ2d 1447, 1452 citing *In re Alappat*, 33 F.3d at 1581, 31 USPQ2d at 1589 (Rader, J., concurring) (emphasis added.)

17. Examiner considers the scope of Section 101 to be the same regardless of whether Applicant *claims* a “process”, “machine”, or “product of manufacture”. While the “system” recitals in the preambles of claims 1 – 17, and 23 make the claims ostensibly drawn to be “apparatus” claims, they are insufficient by themselves to limit the claims to statutory subject matter. Likewise, the presumed attempts to limit claims 19-21, 24, and 25 “product of manufacture” claims are insufficient by themselves to limit the claims to statutory subject matter. Examiner’s position is clearly consistent with *Alappat*, and *AT&T* and is implicitly consistent with *Warmerdam* and *State Street*. Accordingly, those claims are also properly rejected.



***Claim Rejections - 35 USC §112***

The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

18. Claims 1-25 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the MPEP puts it:

(“The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. 101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application **also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112.**”); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) (“Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**”). See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-25 are rejected on this basis.

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***Claim Rejections - 35 U.S.C. §102***

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20. Claims 1-3, 6, 8-15, 17-25 are rejected under 35 U.S.C. §102(e) as being anticipated by Hellerstein et al<sup>1</sup>. Specifically,

### Claim 1

Claim 1's

a client; and

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

Claim 1's

a service broker configured to include an interface to receive a consultation request from the client, wherein the service broker forwards the consultation request to a Neugent to invoke a consultation of the Neugent, and forwards to the client a result object returned by the Neugent.

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<sup>1</sup> Hellerstein, et al (U.S. Patent Number 6,697,791 B2; dated 24 February 2004; class 706; subclass 047).

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Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web server, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach trains a neural network to predict future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

## Claim 2

Claim 2's

2. The system of claim 1, wherein the consultation request includes data for consulting the **Neugent**.

Is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach trains a neural network to predict future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 3

#### Claim 3's

3. The system of claim 2, wherein the **Neugent** performs a predictive analysis of the data included in the consultation request.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach trains a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 6

#### Claim 6's

6. The system of claim 1, wherein the service broker receives through the interface a training request from the client, the training request including training data, and forwards the training request including the training data to the Neugent to invoke **training of the Neugent** with the training data.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future.

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While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 8

Claim 8's

8. The system of claim 6, wherein the service broker forwards to the client a training result object returned by the Neugent after training of the Neugent.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 9

Claim 9's

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9. The system of claim 1, wherein the Neugent groups training data patterns into **clusters**, each cluster corresponding to a group of similar data patterns, and predicts a probability of membership of an input pattern to a selected group.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

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Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

The clusters recited by Applicant are inherent to the operation of neural networks...otherwise there wouldn't be any need for the network. We would use precise equations instead.

### Claim 10

#### Claim 10's

10. The system of claim 1, wherein the Neugent **groups training non-numeric patterns into clusters**, each cluster corresponding to a group of similar non-numeric patterns and predicts a probability of membership of an input nonnumeric pattern to a selected group.

Is anticipated by Hellerstein et al, Abstract, where it recites:

Next, a first **pattern is found or detected** in the obtained event data associated with the event cache. The pattern is then classified. Then, at least one **correlation rule** is constructed based on the classified pattern.

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### Claim 11

#### Claim 11's

11. The system of claim 1, wherein the Neugent forms a cluster model by grouping training data patterns into a plurality of clusters, each cluster

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corresponding to a group of similar data patterns, and determining for each cluster probabilities of transition from the cluster to each of the other clusters, and predicts a probability of an event occurring by applying an input pattern to the cluster model.

Is anticipated by Hellerstein et al, Abstract, where it recites:

Next, a first **pattern is found or detected** in the obtained event data associated with the event cache. The pattern is then classified. Then, at least one **correlation rule** is constructed based on the classified pattern.

### Claim 12

Claim 12's

12. The system of claim 1, wherein the Neugent forms an input-output model associated with a set of training data patterns, and predicts an output value by applying the model to an input pattern.

Is anticipated by Hellerstein et al, Abstract, where it recites:

Next, a first **pattern is found or detected** in the obtained event data associated with the event cache. The pattern is then classified. Then, at least one **correlation rule** is constructed based on the classified pattern.

### Claim 13

~~Claim 13's~~

13. The system of claim 1, wherein the Neugent forms rules associated with corresponding relationships in a set of training data patterns, and predicts an outcome by applying the rules to an input pattern.

Is anticipated by Hellerstein et al, Abstract, where it recites:

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Next, a first **pattern is found or detected** in the obtained event data associated with the event cache. The pattern is then classified. Then, at least one **correlation rule** is constructed based on the classified pattern.

### Claim 14

#### Claim 14's

14. The system of claim 1, wherein the Neugent includes a functional-link net.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 15

#### Claim 15's

15. The system of claim 1, wherein the service broker is a remote **server**.

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

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3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.



**Claim 17**

**Claim 17's**

17. The system of claim 15, wherein the Neugent is server-side.

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

**Claim 18**

**Claim 18's**

receiving a consultation request from the remote client machine;

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new **requests** are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

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**Claim 18's**

forwarding the consultation request to the Neugent to invoke a consultation of the Neugent; and

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

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3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

#### Claim 18's

forwarding to the remote client machine a result object returned by the Neugent.

Is anticipated by Hellerstein et al, col. 1, lin. 60-67; col. 2, lin. 1-27; where it recites:

3. Problem detection. A problem is present if one or more components of the system are not functioning properly. For example, the controller in a load balancing system may fail in a way so that new requests are always routed to the same back-end web **server**, a situation that can be tolerated at low loads but can lead to service degradation at a high load. Providing early detection of such situations is important in order to ensure that problems do not lead to widespread service disruptions.

#### Claim 19

#### Claim 19's

a processor; and

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Is anticipated by Hellerstein et al, claim 9, where it recites:

...at least one **processor** operative to: (i) obtain, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system; (ii) find at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data; (iii) classify the at least one pattern found; (iv) construct at least one correlation rule based on the classified pattern; and (v) replace, in association with the event cache, the one or more events included in the at

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least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

#### Claim 19's

a program storage device readable by the computer system, tangibly embodying a program of instructions executable by the processor to perform the method of claim 18.

Is anticipated by Hellerstein et al, claim 17, where it recites:

17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

#### Claim 20

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#### Claim 20's

20. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method of claim 18.

Is anticipated by Hellerstein et al, claim 17, where it recites:

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17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

## Claim 21

### Claim 21's

21. A computer data signal embodied in a transmission medium which embodies instructions executable by a computer to perform the method of claim 18.

Is anticipated by Hellerstein et al, claim 17, where it recites:

17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

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classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

## Claim 22

### Claim 22's

receiving a train request from the remote client machine;

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

### Claim 22's

forwarding the train request to the Neugent to invoke training of the Neugent;  
and

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The

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policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

#### Claim 22's

forwarding to the remote client machine a training result object returned by the Neugent.

Further, it is anticipated by Hellerstein et al, col. 2, lin. 41-54; where it recites:

Recently, a third approach to event correlation has been proposed by Computer Associates International called "**Neugents**." This approach **trains** a neural network to **predict** future occurrences of events based on factors characterizing their occurrence in historical data. Typically, events are specified based on thresholds, such as CPU utilization exceeding 90%. The policy execution system uses the neural network to determine the likelihood of one of the previously specified events occurring at some time in the future. While this technique can provide advanced knowledge of the occurrence of an event, it still requires specifying the events themselves.

#### Claim 23

#### Claim 23's

a processor; and

Is anticipated by Hellerstein et al, claim 9, where it recites:

...at least one **processor** operative to: (i) obtain, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system; (ii) find at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data; (iii) classify the at least one pattern found; (iv) construct at least one correlation rule based on the classified pattern; and (v) replace, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

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### Claim 23's

a program storage device readable by the computer system, tangibly embodying a program of instructions executable by the processor to perform the method of claim 22.

Is anticipated by Hellerstein et al, claim 17, where it recites:

17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

### Claim 24

### Claim 24's

24. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method of claim 22.

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Is anticipated by Hellerstein et al, claim 17, where it recites:

17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

### Claim 25

Claim 25's

25. A computer data signal embodied in a **transmission medium which embodies instructions executable by a computer** to perform the method of claim 22.

Is anticipated by Hellerstein et al, claim 17, where it recites:

17. An article of manufacture for systematically constructing one or more correlation rules for use by an event management system for managing a network with one or more computing devices, the article comprising a **machine readable medium containing one or more programs** which when executed implement the steps of:

obtaining, in association with an event cache, event data representing past events associated with the network of computing devices being managed by



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the event management system;

finding at least one pattern in the obtained event data associated with the event cache, the at least one pattern including one or more events in the obtained event data;

classifying the at least one pattern found;

constructing at least one correlation rule based on the classified pattern; and

replacing, in association with the event cache, the one or more events included in the at least one pattern with a composite event such that hierarchical patterns may be subsequently found for use in constructing further correlation rules.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- A. Campaigne, et al (U.S. Patent Number 6,496,812; dated December 17, 2002; class 706; subclass 016) discloses a method and system for measuring and valuing contributions by group members to the achievement of a group goal.
- B. Bush (U.S. Patent Number 6,236,942; dated May 22, 2001; class 702; subclass 014) discloses a system and method for delineating spatially dependent objects, such as hydrocarbon accumulations from seismic data.
- C. Lewis, et al. (U.S. Patent Number 6,759,010; dated July 6, 2004; class 422; subclass 082.02) discloses the use of an array of polymeric sensors of varying thickness for detecting analytes in fluids.

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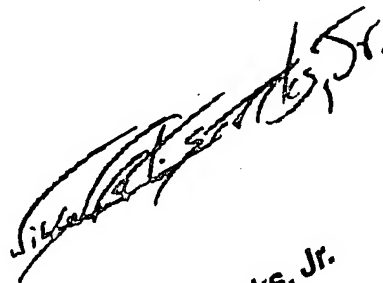
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01 February 2005



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